

Surcouf, MS., *T. sharpei* is distinguished *inter alia* by the broader front, the much shorter and broader basal portion of the third joint of the antennæ, the shorter palpi, conspicuous grey stripes on the front part of the dorsum of the thorax, the shape of the abdominal markings, and the hyaline wings.

XXXIII.—*On Phytosaurian Remains from the Magnesian Conglomerate of Bristol* (*Rileya platyodon*). By FRIEDRICH BARON HUENE, D.Sc., Tübingen, Germany.

[Plate VI.]

SOME years ago the writer published (Pal. u. geol. Abhandl. vi. (x.) 1902, pp. 62 & 63) a description of one humerus and two vertebræ from the Bristol Conglomerate as Phytosaurian, with the new name *Rileya bristolensis*. Now, after having finished the monograph of European Triassic Dinosaurs (which has not yet completely appeared), I find some more Phytosaurian bones, which I propose to describe here.

The tooth described by Riley and Stutchbury (Trans. Geol. Soc. v. 1836, pl. xxix. fig. 5) as *Palæosaurus platyodon* (and figured by Owen, 'Odontography,' 1845, pl. lxii. A, fig. 7) is not a Dinosaurian, but a Phytosaurian tooth. There is no difference between this tooth and some of the Belodont teeth in the Stuttgart Museum. The name *Palæosaurus* cannot be accepted, because it is preoccupied by Geoffroy for another reptile (Mém. Inst. xii. 1831, p. 48). As this tooth and seven other bones are the only Phytosaurian remains amongst a great many Dinosaurian bones, it is highly probable they belong to the same animal. Some of the bones alone have been called *Rileya bristolensis*, therefore the generic name *Rileya* must now comprise the tooth also. Of course the oldest of the specific names has to be applied, so the animal will be called *Rileya platyodon*, Riley and Stutchbury sp.

Teeth.—The outline of the broad and compressed tooth (type specimen in the Bristol Museum) is like that of a broad lancet-shaped leaf. The base is a little laced. The sharp anterior and posterior edges are finely serrated, so that in 1 mm. length there are little more than 3 denticules. The latter are disposed vertically to the border. The crown is 17 mm. long and 12.5 mm. in maximum breadth. Another tooth from Bristol is in the British Museum (Pl. VI. fig. 1).

Vertebrae.—The vertebrae (fig. 2) are too long for the two species of *Thecodontosaurus* occurring at Bristol. Both centra are similar to those of *Steganolepis Robertsoni*, Huxley, from Elgin (Pal. u. geol. Abhandl. vi. (x.) 1902, p. 63, fig. 76). They are proximal caudal vertebrae. One of them is 30 mm. long and 25 mm. high, the other is 48 mm. long and 23 mm. high. Both articular faces are slightly concave. There are low præzygapophyses preserved. These vertebrae are in the possession of the Yale University Museum, New Haven, Conn., U.S.A.

Hæmapophyses.—In the Bristol Museum (no. 30) is a proximal hæmapophysis (fig. 3). It is widely bifurcated and had probably two separated articular faces. The distal extremity is broken off.

	mm.
Preserved length.....	40
Greatest diameter from one proximal ramus to the other	30
Length of the clasp, anterior side.....	16
" " posterior side	30
Transverse diameter of the clasp	9

Humerus.—The writer has already described one humerus (Pal. u. geol. Abhandl. vi. (x.) 1902, p. 62, fig. 75), and in the British Museum is a second one. Both are right humeri. That in the British Museum (fig. 4) is incomplete at the distal end, but it is larger than the humerus (fig. 5) in the Bristol Museum (nos. 95 & 96). The anterior aspect of the proximal end is not visible in both humeri; therefore the length of the processus lateralis is unknown. The proximal and distal ends have the same breadth. The median border is strongly incurved, the lateral one is nearly straight. Besides the condylus lateralis is a broad and sharp-edged ectepicondylus. The caput humeri is broken off in both specimens.

	Bristol specimen. mm.	Brit. Mus. specimen. mm.
Total length	170	(?) 190 (pre- served 150)
Width at proximal end	55 (? 60)	75 (80 ?)
" distal end	50 (? 60)	..
Diameter in the middle of shaft..	20	23

Radius.—A bone in the Bristol Museum (no. 52) is to be taken as the radius (fig. 6). It is not quite complete at both extremities. The thicker end is the distal one; it shows a

stronger curvature to one side, which must be the ulnar one. The section at the proximal end is oval.

Preserved length	mm. 130
Probable length	135
Diameters at proximal end	25/15
Diameter in the middle	12
Diameters at distal end	30/17

Metacarpal.—A little flat bone (fig. 7) in the Bristol Museum (no. 102) is probably a metacarpal bone. It resembles a little the metacarpal of *Rhytidodon* figured by McGregor (Mem. Amer. Mus. Nat. Hist. ix. 1906, pl. ix. fig. 27).

Length	mm. 56
Diameters of proximal end	30/12
" distal end	19/11
" in the middle	8/17

The bones of *Rileya platyodon* indicate an animal of great size. It might be as large as *Mystriosuchus*, *Belodon*, and *Rhytidodon*; it is even larger than *Steganolepis*. The anterior leg is much more slender than in *Steganolepis*, about as much as in *Rhytidodon*, only the metacarpals seem to be more enlarged at both extremities. The hæmapophyses have two articular faces, as in *Rhytidodon*.

The teeth of "*Palæosaurus*" *stricklandi*, Davis (Quart. Journ. Geol. Soc. xxxvii. 1881, pl. xxii. fig. 6), from the Rhætic, which are very similar to those here described, also of course belong to a Phytosaur.

EXPLANATION OF PLATE VI.

- Fig. 1.* Tooth of *Rileya platyodon*, Riley and Stutchbury sp., about nat. size (specimen in the British Museum). *a*, side view; *b*, front view; *c*, transverse section; *d*, enlargement of the serration.
- Fig. 2.* Two caudal vertebræ (in the Yale University Museum, New Haven, Conn.), $\frac{1}{2}$ nat. size. Each shows one præzygapophysis.
- Fig. 3.* Back view of proximal hæmapophysis (in the Bristol Museum, no. 30), $\frac{1}{2}$ nat. size.
- Fig. 4.* Back view of right humerus (in the British Museum), $\frac{1}{2}$ nat. size.
- Fig. 5.* Back view of right humerus (in the Bristol Museum, no. 95), $\frac{1}{2}$ nat. size.
- Fig. 6.* Radius (in the Bristol Museum, no. 52), $\frac{1}{2}$ nat. size. *a*, whole view; *b*, distal end from opposite side; *c*, distal end from right side of fig. *a*; *d*, section at proximal end; *e*, section in the middle; *f*, section at distal end (the flat side of it is upper side in fig. *a*).
- Figs. 7 a, 7 b.* Metacarpal (in the Bristol Museum, no. 102), $\frac{1}{2}$ nat. size. Two views of the same.